

# ICE BREAKER

No.6

March 1999



**Antarctic Kite Flying  
and  
ISCORD 2000**



## ICE BREAKER

ICE BREAKER is published independently by Malcolm Wallhead and Associates as a quarterly magazine covering Tasmanian Polar and Southern Ocean related topics.

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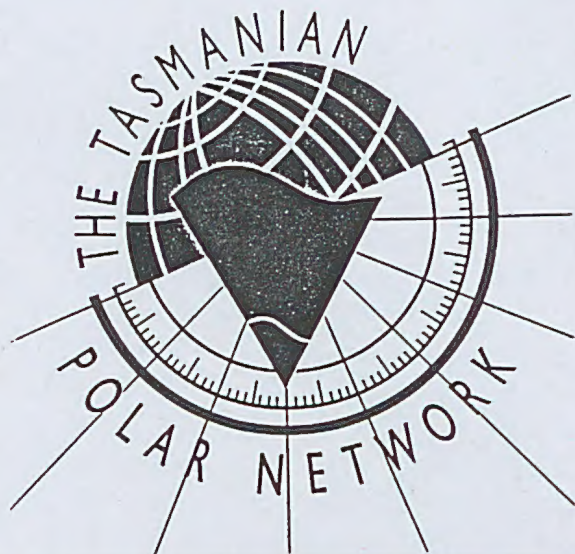
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Cover: From a photograph courtesy *Enigma Kites*.

## EDITORIAL

The tragic helicopter crash which killed three French expeditioners last month is a stark reminder of some of the perils of polar exploration and research. However, the knowledge gained from Antarctic expeditions is essential for the understanding of the earth and its climate both in the past and for future generations, and one must praise those people who risk their lives in pursuing this knowledge. I know that all those Tasmanians involved in Antarctic affairs in any way would wish to join me in offering condolences to the families and friends of the three men who were killed in the crash.

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At the end of January in the year 2000, Hobart will be hosting the "International Symposium on Cold Region Development." (See full story pages 6 and 7.) During the first two and a half days of the conference a commercial exhibition will be arranged at the same venue as the symposium. With a captive audience of about 200 professionals from countries all over the world, this is an opportunity too good to be missed.

Unlike arranging an exhibition overseas, there are no freight costs involved, no travel costs to be paid, and no expensive accommodation costs. I hope that all polar-related businesses in Hobart and throughout Tasmania, whether Tasmanian Polar Network members or not, will take full advantage of this rare opportunity, and support this ISCORD-2000 exhibition.

MW



# FROM THE PREMIER'S DESK

A number of issues are on Tasmania's Antarctic horizon. How they break will have significant impact on the State's Antarctic future.

By far the most publicised issue in recent times has been the unfortunate mechanical problems on the "Aurora Australis" and the impact this has had on the Australian Antarctic Division's program of science in Antarctica. On that point, the Australian Antarctic Division should be congratulated on the manner in which it has maintained elements of the program and resupply, in the face of extremely difficult circumstances.

From a Tasmanian point of view, the breakdowns have had a positive effect, for they have provided an impetus to the call for a more flexible transport policy. The need for an intercontinental air service between Hobart and Antarctica has been mentioned, as well as the need for a more flexible sea link, possibly involving more than one ship. Obviously the Australian Antarctic Division will need to consider all the options available in the future, when it makes up its mind as to the best combination to meet its future transport needs. My Government considers the evaluation of an air service as a part of this process a positive step.

The Eastern Antarctic Air Network involving at least Russia and China is also proceeding well. I understand that a blue ice strip will be constructed at Progress Base, providing its environmental impact is acceptable. The advantage of this strip in the Larsemann Hills is that it could provide a distribution point for other bases using rotary wing aircraft. This raises the possibility of both Russia and China using Tasmania's resupply capacity to a greater extent than previously. Having Russia, China and Australia all considering intercontinental air services to Antarctica suggests an opportunity for cooperation, that could lead to reducing the establishment and operational costs of the service while, at the same time, increasing its long term viability.

The Government, as a part of its State Audit process, will be reviewing its future Antarctic policy over the months to come. The aim of these considerations is to determine the most effective way for Government to commit its resources in this area. I am aware there are a number of opportunities in developmental research, education and training that should be further evaluated.

I have been informed that the Tasmanian Polar Network is involved in a similar process, reviewing its past achievements, evaluating future opportunities and identifying measurable targets to monitor progress towards its goals. I applaud you on proceeding down this road, for without an idea of where you are going and how you might get there, it is easy to commit your resources and effort in a less than favourable direction. I would be interested to learn of the final outcomes of your deliberation.

I appreciate the opportunity to communicate with members of the TPN through the medium of ICE BREAKER magazine and wish you well with your future deliberations.

**Jim Bacon**  
**Premier**  
**Minister for State Development**



# TPN Chairman's Message

On Thursday 4 February a small group of TPN members committed themselves to spend the afternoon and evening in a workshop together under the facilitation of Tony Ibbott in order to determine the way forward for the Network over the years ahead. We particularly focused on setting goals with measurable outcomes in order to be able to determine the success, or otherwise, of the TPN's activities and endeavours. In seeking to determine future steps, the good past work of the TPN in meeting and greeting international Antarctic visitors to Hobart was both recognised and maintained as a high priority.

Particularly we noted the "Unity of Purpose" and "Bipartisan Political and Vice Regal Support and Stability" on key critical success factors for the TPN's future. The current period of change through which many of Australia's Antarctic related endeavours are passing, were noted as creating opportunity for significant and effective TPN input if we have the energy and vision to do so as a group.

In order to determine this and noting the relatively low numbers of participation in the workshop, it is intended that a canvas of opinion amongst the Network's full membership be conducted regarding the Workshop's output before proceeding to define measurable outcomes for our future endeavours. I urge all members to carefully review and consider the summary soon to be forwarded to them, as this will be the last chance to make input to this process before we publicly declare our intentions and plans for their achievement.

Finally, I note and commend to all TPN members, the BBQ plan for 5.30pm on 6/3/99 for us to meet and greet our Chinese Colleagues on board the "Snow Dragon", which is due to visit Hobart for a few days. We will be providing details soon, regarding venue and cost and I ask that as many members as possible attend this function for both the fellowship and the goodwill it will create between our countries.

**Bill Lawson**

Chairman

19/2/1999

## DESTINATION NORTH

Malcolm and Anthea Wallhead will be spending three weeks in Europe and UK this month and will visit nine polar institutes in Italy, Germany, The Netherlands, France and England. All institutes have previously purchased Igloo Satellite Cabins and other polar field equipment, and it is understood that at least two are interested in re-ordering.

Appointments have been made for discussions on polar products, ICE BREAKER magazine and the Tasmanian Polar Network Inc, and copies of ICE BREAKER will be distributed to each institute visited. The Wallheads will also be visiting maritime, science and polar museums for new ideas and information useful to Hobart's polar community.



## PETER HODGMAN WRITES

Congratulations to Bill Lawson and the Tasmanian Polar Network for organising the Search Conference for the future directions of the TPN. They, and everyone else who participated, made a great contribution.

The outcome of the workshop will provide a foundation-stone for Tasmania's future in Antarctic affairs. We looked at our successes, and our failures, in an open and honest way.

Antarctic opportunities provide economic and employment benefits for us all, but we are in a highly competitive marketplace for business. South Africa, New Zealand and South America, as well as Western Australia, have all tried to take a slice of our Antarctic pie.

Exclusive rights do not exist, and this \$100 million industry could be lost to Tasmania if we don't all lift our game and do it better. Tasmanian must keep selling its Antarctic benefits at the Antarctic Treaty Nations conference and all other Antarctic gatherings. Rest assured that our competitors are!!

The members of the Tasmanian Polar Network should join with the Tasmanian Government in a joint promotion of our State at the next Antarctic Treaty Nations conference in Peru, in June of this year. We need to present our "Antarctic Showcase" to all the countries involved in Antarctica. This is a "one-stop-shop" opportunity that we cannot afford to miss.

The workshop showed we have a lot to be proud of - quality Antarctic commodities, a proven ability to cater to the needs of different countries, quality travel and tourism opportunities - to name just a few.

Now it is time to go out and sell this!!

**Peter Hodgman MHA**  
**Shadow Minister**  
**Antarctic Affairs**

## Hobart-Antarctic Air link

Dr Valery Klovov, of the Russian Antarctic Expedition (RAE), is currently in Antarctica continuing with preliminary investigations on the development of an ice airstrip.

Dr Klovov has advised that a suitable site for an airstrip has been identified which is 2,500 m long and 90 m wide. Technicians at the Russian Progress Station have refurbished one roller and three heavy-wheeled tractors that can be used to grade the airstrip.

The RAE are completing an Environmental Impact Assessment (IEE) as required under the Madrid Protocol which is expected to be circulated to Antarctic Treaty countries in March this year.

It is hoped to complete construction of the airstrip next season.

*Jack Sayers, COMNAP Secretariat*

## Chinese Ship Visit

The Chinese resupply vessel Xuelong is expected to visit Hobart in early March 1999 following its visit to Zhongshan Station in the Larseman Hills.

The vessel will be returning with the 1998 wintering party. Dr Valery Klovov of the Russian Antarctic expedition will be returning on the vessel to spend several days in Hobart before flying home to St Petersburg.

*Jack Sayers, COMNAP Secretariat*

**ICE**  
**BREAKER**



# ISCORD 2000

## The International Symposium on Cold Region Development

The Board of Directors of International Association for Cold Region Development Studies (IACORDS) approved the choice of Hobart as the venue for the Sixth ISCORD. Known as ISCORD 2000 it is to be held from 31 January 2000 to 6 February 2000.

IACORDS is an organisation that promotes the advancement of science and technology in cold regions and contributes to the further development of the economy and society of cold regions. It operates through communication among members and exchanges of scientific and technical information related to cold region development. One of its major activities is to sponsor ISCORD every three years.

The Fifth International Symposium on Cold Region Development - ISCORD 1997 was held in Anchorage, Alaska from 4 to 10 May 1997.

ISCORD conferences are international events held in co-operation with governments and professionals in the scientific and business sectors, for the purpose of promoting the exchange of information and experience in order to advance economic and technical progress in cold regions. Approximately 150 Northern Hemisphere delegates, along with an additional 50 from Australia and New Zealand, are expected to attend ISCORD 2000 with accompanying families and colleagues.

Previous conferences have taken place in:

- Sapporo, Hokkaido Prefecture, Japan (1983)
- Harbin, Heilongjiang Province, People's Republic of China (1988)
- Edmonton, Alberta, Canada (1991)
- Espoo, Finland, (1994)
- Anchorage, Alaska (1997).

ISCORD 2000 will be the first time this prestigious conference has come to the Southern Hemisphere.

Since Hobart received the nomination in 1997 a web site has been produced at the University of Tasmania. The web site was funded by the Government through the Office of Antarctic Affairs and can be viewed at <http://www.anterc.utas.edu.au/iscord>.

A preliminary program has been designed and includes the following topics:

- A) General Development Policy and Projects.
- B) Building, Housing and Construction.
- C) Regional Development.
- D) Logistics, Infrastructure, Transport and Communication.
- E) Rural, and Energy Resource Development.
- F) Environment, Recreation and Tourism.

Because of Hobart's current association with Antarctica an overlying theme of Arctic/Antarctic management and scientific development will be encouraged. Subjects such as international co-operation,



global climate change, alternative energies, management of international fisheries, human impacts and tourism could provide common themes in this area.

## Exhibition

At the same time as the Conference, a commercial exhibition supporting the main themes will be arranged at the symposium venue. The exhibition will be open to all interested companies and organisations. The cost of exhibition space will be \$1,500 per space and the program will be arranged so events such as tea breaks and cocktail evenings will be held in conjunction with the exhibition. The exhibition will last for the first 2.5 days of the symposium.

A stand at the exhibition would provide the TPN with the opportunity to meet with cold climate professionals from most of the Northern Hemisphere countries. At Anchorage were representatives from Japan, Norway, Russia, China, India, Australia, USA, Switzerland, Canada, Finland, Sweden and the United Kingdom.

The Convenor of ISCORD 2000 is Tony Hughson with help from Dr Mike Pook of the Antarctic CRC and Chris Patterson of AAD.





## KITES IN ANTARCTICA

During the Summer of 1994-5 we had a softly spoken lady come into the kite shop, here in Hobart, saying she would like to buy a stunt kite. She said she hadn't flown one before, but that wasn't unusual as sport kite flying had taken its time getting to our shores.

"It's very windy where we are going," she told me.

"King Island?" I suggested.

"No, to sub-Antarctica," was the reply.

Some months later she appeared again, very briefly, and left some photos with us. I'm sure that kite flew only to get away from the novice flyers. The one thing you don't do when flying a two line kite is hold your arms above your head.

The land in the photos was covered with what I would call tussocks of grass and outcrops of rock half to one metre high which sloped down towards the distant sea. We had had the old school atlas out previously but there were no signs of this island, so off we went to the reference library. Sure enough, there it was, a small dot south of the South Island of New

Zealand - Campbell Island. I never did find out why she went there apart from learning to fly a kite!

Since that time we have sold not only two line stunt kites but also the newer Quadline Power Traction Kites - but why oh why do they leave it until the day before they sail to want to make a purchase?

Lines seem to be the biggest problem, not only the rewinding but actually being able to see, or not to see them, laying on the ice. I suggested beetroot juice but I guess the idea hasn't taken on.

The photo was sent by Maria de Denge from Mawson Base in February 1998 of a one and two metre square Quad purchased from us that Summer. These kites are not only of a high standard of manufacture but are soft cell, with no spars, and are easily packed into minimal space.

Genevieve Duhig and Allan Parish  
*Enigma Kites* - Hobart  
E-mail: [parish@southcom.com.au](mailto:parish@southcom.com.au)





# **POLAR NEWS**

## **ICE CORE TO BEDROCK**

After three years of drilling through ice near Siple Dome, 800 kms north of the South Pole, scientists have at last reached bedrock more than 1 km beneath the surface.

An almost complete column of ice, 12.7 cm in diameter, was pulled up in pieces 1-5 metres long, containing a record of 80,000-100,000 years of climatic changes locked in bubbles of air, dust, volcanic ash and other chemicals.

The Siple Dome project, sponsored by the National Science Foundation in Washington, is designed to help determine whether the ice cap, which lies partly over solid rock and partly over the Southern Ocean, ever disintegrated entirely, at least in W. Antarctica.

There is already existing evidence that the ice did vanish about 125,000 years ago and it is believed it may do so again if the present ice cap continues to break up as the world's climate warms.

## **OZONE HOLE STILL ENLARGING**

Last year the hole in the ozone layer over Antarctica was the largest and most intense ever measured.

Argentinean meteorologists reported that the hole lasted a month longer than the previous year and that the area covered by low ozone values was larger than 10 million square metres for more than 100 days.

## **ANTARCTIC FOOD CHAIN THREATENED**

Dr Steve McNichol, a marine biologist at the Australian Antarctic Division, has discovered that krill are highly sensitive to the ultraviolet light from the hole in the ozone layer.

If krill are unable to adapt to the warmer air temperatures and reduced ice cover, or are massively harvested by an American corporation (which conservationists fear), the impact on the quantity of krill available for seals, penguins, whales and sea birds could be disastrous.

## **TOOTHFISH PATROLS**

New Zealand is taking direct action against illegal fishing in the Southern Ocean by sending ships and planes to search Antarctica's Ross Sea for fishing boats unlicensed to catch Patagonian Toothfish.

NZ Air force long-range Orion surveillance planes flew over the area in January this year and a Navy frigate patrolled waters near the Ross Ice Shelf in February, but unfortunately no signs of pirate fishing boats were found.

These patrols are at least a positive move to try and control illegal fishing, which was estimated by some people last year to be half the total catch of 60,000 tonnes worth \$85 million.

## **SOLAR POWERED PRIZE**

This year's Australia Prize winners, Martin Green and Stuart Wenham of the University of NSW, addressed a lunchtime meeting in Hobart on Tuesday February 23, 1999.

The meeting was attended by over 50 people who viewed a video on the making and usage of solar cells developed by the two researchers. Martin and Stuart are responsible for creating the world's most efficient solar cells and their record stands at 24.5% of received sunlight converting into electricity.

Information on the existing solar powered equipment available included some examples used in Antarctica, where the cold temperatures increase the efficiency of sunlight received by the solar cells.



# MEMORIAL SERVICE FOR THE FRENCH

Three French expeditioners killed in a helicopter crash in Antarctica were mourned at a memorial service at the "French Memorial" in Cornelian Bay Cemetery, Hobart.

The three men killed in the accident were all in their 30s. They were the pilot, Bruno FIORESE, the chief engineer Dario LATTANZI, and the logistics officer Pascal LE MAUGUEN.

The bodies were brought back to Hobart on the research ship L'Astrolabe and arrived on Wednesday the 17th of February. The memorial service was held at 11-30 the following morning. Afterwards the bodies of the three men were flown home to France for burial.

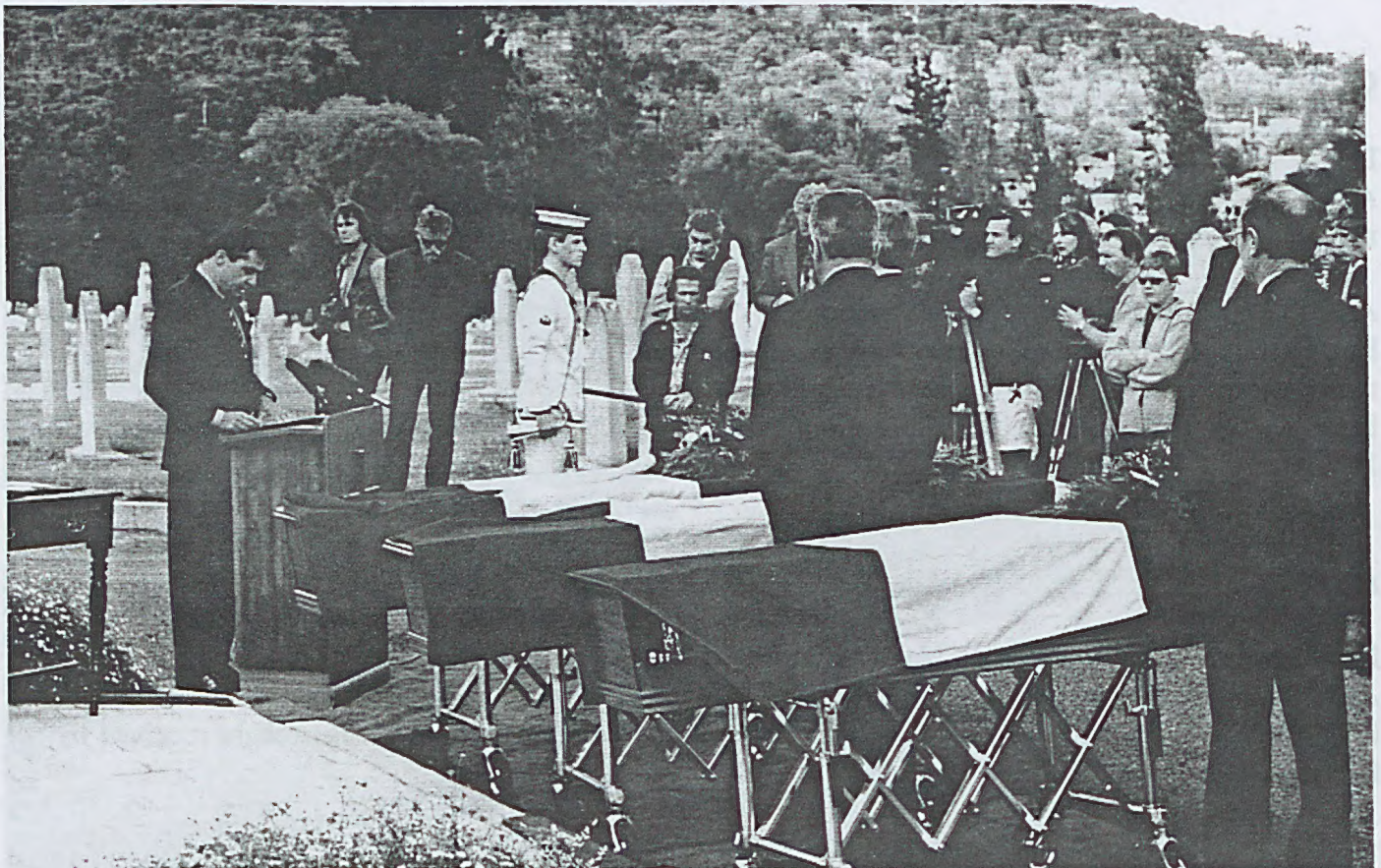
The service was conducted by the Honorary State French Consul, Bill Ayliffe, and the French Consul-General from Melbourne, Rollon Mouchel-Blaisot, with more than 100 locals and crew members attending. The Tasmanian Governor's

representative, Honorary Air Force aid-de-camp Flight Lieutenant Alan Robertson assisted at the ceremony.

Malcolm and Anthea Wallhead were nominated by the chairman of the Tasmanian Polar Network to represent those members who could not attend the memorial service, and most of Hobart's polar community were represented at the service.

Behind the "French Memorial" plaque containing the names of 70 Antarctic expeditioners who had passed before, the French national flag flew at half mast. The coffins of the three men were also draped in French flags and lined up, side by side in front of the memorial while the haunting notes of "The Last Post" were played by a lone bugler.

Rollon Mouchel-Blaisot said that the names of the three men will be added to the plaque of the "French Memorial".









# POLAR NEWS

## TPN INC

The Tasmanian Polar Network has now been formally incorporated since 14th January 1999, and boasts a membership of 32 with members from Antarctic-related facilities including the State Government, major research and educational bodies and a broad range of private businesses devoted to supplying polar goods and services.

Plans for activities are well underway, with the TPN Search Conference of February 4 providing an important opportunity to focus on the TPN's ability to enhance its business profile and influence polar decision-making.

Thanks must go to Tony Ibbott for his well-structured workshop, which was attended by 15 TPN members, all of whom contributed ideas and opinions to help define future TPN targets and activities.

## SOUTH POLE MILLENNIUM PARTY

The Dartmoor-based Polar Travel Company has advertised for 5 guests to attend a once-in-a-millennium New Year's Party at the South Pole. After paying \$A 152,000 each, and passing a rigorous training program, guests will have to haul everything they need on a 91 kg sledge for 1171 kms, in time to celebrate the year 2000 at the Pole.

## ANTARCTIC ADVENTURE ATTENTION

Fewer than expected visits to ANTARCTIC ADVENTURE have prompted a review of operations recently, and those interested in visiting can look forward to discounts and a wider variety of activities and displays.

One of the new features to be introduced in the next 12 months will be a 7.3m by 3.6m insulated

plywood hut built in Melbourne in 1950 for use at Heard Island. The hut was moved to Mawson Station in 1955 for use as a biology laboratory and meteorological technician's workshop until 1993, when more modern buildings made it redundant.

The hut will be shipped to Hobart by the Antarctic Division and Antarctic Adventure will be required to restore and preserve it for public display.

## ANTHEA'S WORD

If your subscription to ICE BREAKER began with Issue 3, please remember to re-subscribe before June 1999 to receive the next four issues. Subscription rates (\$20 per year) and advertising rates (only \$25 per quarter page) will remain the same. The enclosed subscription form can be photocopied and distributed to anyone interested in Antarctic activities, and cheaper rates for bulk purchasing still apply.

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# TPN CORPORATE IMAGE

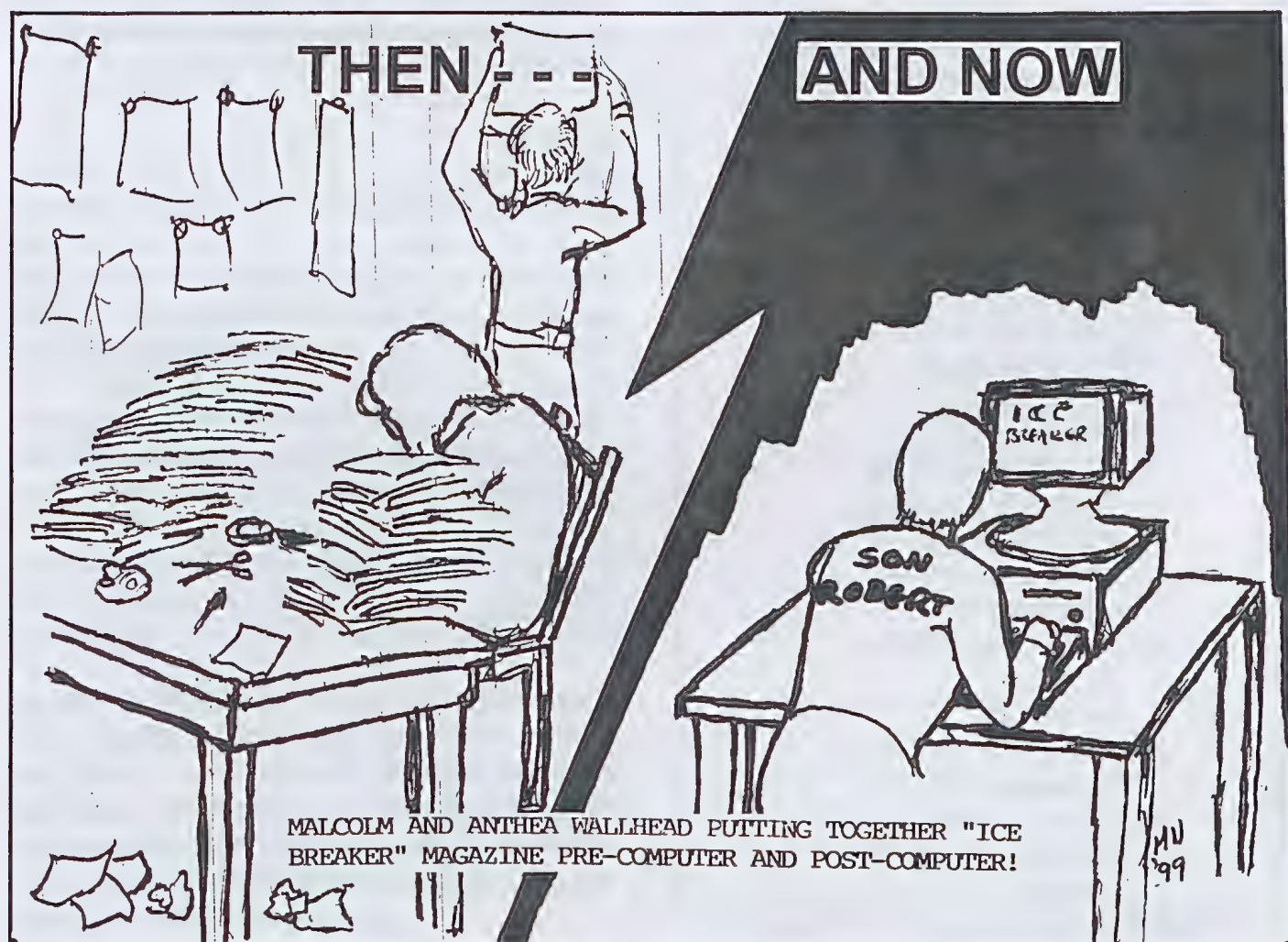
The Tasmanian Polar Network (incorporated) has taken the first step towards developing a common corporate identity with the selection of a type of display stand to be used at all TPN trade shows and displays.

The chosen units are lightweight and able to be divided into two halves for transport, making them ideal for use for overseas presentations. In addition, by using several units together, displays can be mounted in a variety of configurations such as square or triangular columns, triangular tables ( with a table top added ) or in the more traditional flat or zigzag wall-side configurations.

An added attraction to these display stands is that they have a very professional appearance and are fabricated in Tasmania.

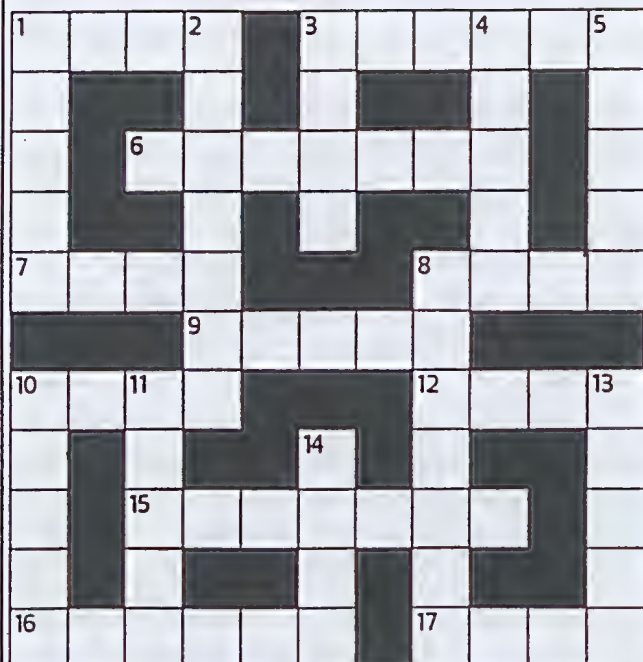
At the time of writing, members of the TPN had agreed to purchase a total of nine of these display stands ensuring the beginnings of a unified image for the network. Further development of a common identity is underway to link each of the individual displays to each other and to provide members with a standard identity badge to make them easy to recognise in a mixed group of people.

The remaining design work should be completed within the next eight weeks and if accepted by the TPN committee and membership this will enable the TPN to mount displays with a complete corporate image in time for forthcoming events such as ISCORD 2000.





## POLAR CROSSWORD



### ACROSS

1. Floating ice (4)
3. ----- AUSTRALIS (6)
6. Forward movement (7)
7. Rigging support (4)
8. Strong wind (4)
9. Outdo (5)
10. Frozen (4)
12. N. Polar birds (4)
15. S. Polar bird (7)
16. Made on scrimshaw (6)
17. Polar explorer (4)

### DOWN

1. National symbols (5)
2. Suffered (7)
3. Not at home (4)
4. Rarely sung well by expeditioners! (5)
5. Initials of expeditioners' club (5)
8. Ice river (7)
10. On cakes or freezing (5)
11. Uninhabited (5)
13. S. Polar birds (5)
14. Items protected from predators (4)

## ANTARCTIC CRC NEWS

After a relatively quiet summer the level of activity around the CRC has picked up in the past few weeks. Largely, this has occurred because the Academic Year for IASOS commenced a week earlier than in previous years. On Monday 15 February the new batch of Honours students commenced their course. The class numbers around 20, including 3 graduates from the University of Tasmania, 3 from the University of Hannover, one from the University of Puget Sound, one ex-stockbroker with original degrees from Bristol and Imperial College and the remainder are from various other Australian universities.

From Friday 5 March to Sunday 7 March, the Honours class will be heading to Gowrie Park for a weekend of glacial geomorphology around Cradle Mountain and various river valleys. This excursion is designed to bond the class together and also to increase links between staff and students. Of course, it's hoped that they will actually learn something about the past climate of Tasmania as well.

Mike Pook

## ANTARCTIC STUDIES INCLUDED

New "strategic scholarships" for PhD and Masters students are being offered by the University of Tasmania this year, and Antarctic and Southern Ocean Studies are expected to be included as one of the four key areas in which the scholarships are available. Each scholarship is worth \$16,000 per year over three years.

## SOUTHERN SQUID GRANT

A specialist squid biologist at IASOS, Dr George Jackson, has been awarded a \$171,000, 3 year Australian Research Council Grant to study the life span and sex life of the warty squid, an important pelagic organism in the Southern Ocean which has been scarcely researched to date.



# POLAR NEWS

## POLAR TRIPPERS

1. Melbourne couple Jim and Yvonne Claypool sailed from Hobart to Antarctica on their yacht the SPIRIT OF SYDNEY on January 5, 1999, to spend 12 months at Commonwealth Bay. They will live in the 2x3m hut built by Don and Margie McIntyre in 1995, and will communicate with their family by E-mail and satellite phone.

2. On February 7, 1999, Queensland sailors Terry Travers and Robin Chamberlin successfully completed a one month voyage from Hobart to Commonwealth Bay and back in a 13 metre catamaran called EXCESS.

The aim of the trip was to assess the suitability of catamarans in Antarctic conditions and to test heavy weather survival techniques. Cat and crew coped with 50-60 knot winds and 10-12 metre swells; as well as one hull hitting ice and losing a rudder. EXCESS is the first catamaran known to survive within the Antarctic Circle.

3. The two Australians and a New Zealander retracing Robert Scott's 1912 polar trek finally reached the South Pole on Australia Day, 26 th January, 84 days after they began. The team dragged 100 kg sleds through unseasonal blizzards and had to cope with gastro-enteritis and frostbite during their journey.

Although they did not achieve their return journey, they pioneered a route up the Shackleton Glacier to the polar plateau and then on to the Amundsen-Scott Base where they were greeted and photographed by about 100 Americans stationed there.

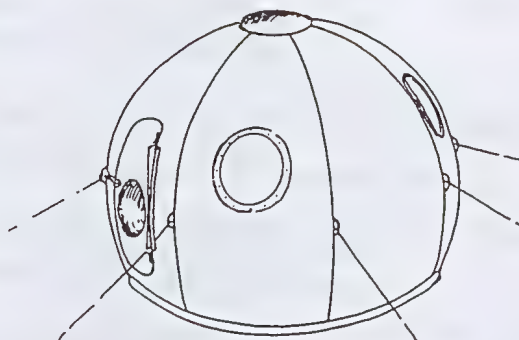
## NEW TRAIN OF THOUGHT

Congratulations to Bill Lawson, SKM's Manager and the Chairman of the Tasmanian Polar Network, for his appointment as Project Manager for the Abt Railway Restoration.

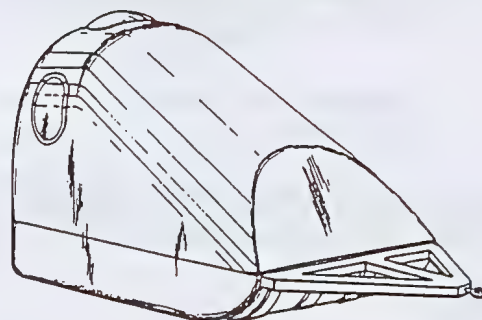
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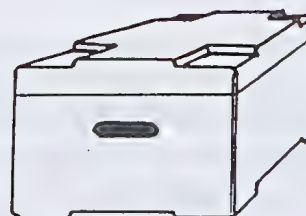
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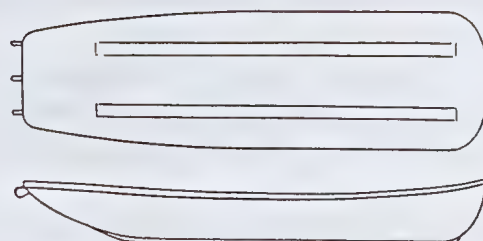
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EXPEDITION AND RESCUE SLEDGES

## POLAR FIELD EQUIPMENT



## ICE WORDS UN-ICED

- BERGY BIT - A piece of floating ice rising 1-5 metres out of the water.
- BUMMOCK - A submariner term for a stalactite-like ice formation hanging down from beneath pack ice.
- GROWLER - Small - and therefore difficult to see or pick up on radar - piece of ice awash with waves and thus a hazard to shipping.
- HUMMOCK - An area where ice floes have rafted, or piled atop one another, often reaching heights of several metres.
- NILAS - Thin crust of floating ice that blends with waves but does not break; the darker its appearance, the thinner the nilas is.
- SHUGA - Spongy white ice lumps, formed from grease ice or slush.
- TABULAR BERG - Iceberg with straight sides and a flat top, indicating that it has calved relatively recently.

## POLAR PUBLICATIONS

### BOOKS:

‘ALBATROSS: BIOLOGY AND CONSERVATION’ edited by Graham Robertson (AAD) and Rosemary Gales (TAS PAWS). Published by Surrey Beatty & Sons. Price: \$82.

This 23 chapter book includes 13 chapters drawn from papers presented at the inaugural albatross conference in 1995, plus 10 chapters which further broaden the subject into a comprehensive book covering ‘systematics and status, population studies, foraging and fisheries relationships, mortality due to fisheries and other factors, perspectives and assessments of future research priorities in the albatross sciences, and conservation efforts.’

“PHILLIP LAW - THE ANTARCTIC EXPLORATION YEARS - 1954-66” by Kathleen Ralston. Published by AUSINFO, Canberra 1998. Price: \$39.95. (Available from Government Information Shops.)

This is the second volume of Dr Ralston’s biography of Dr Phillip Law A.C.,C.B.E.,P.M., founding Director of the Australian Antarctic Division, and covers the period from the development of Mawson Station up to the completion of the mapping of the coastline of Australia’s Antarctic Territory.

(Information reprinted courtesy of Malcolm Kirton, Editor, ANARE Club Journal, AURORA.)



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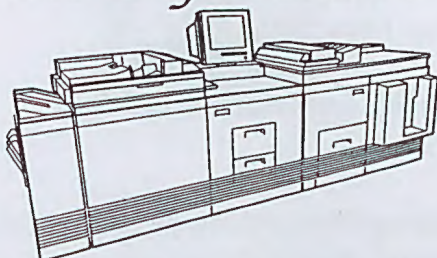
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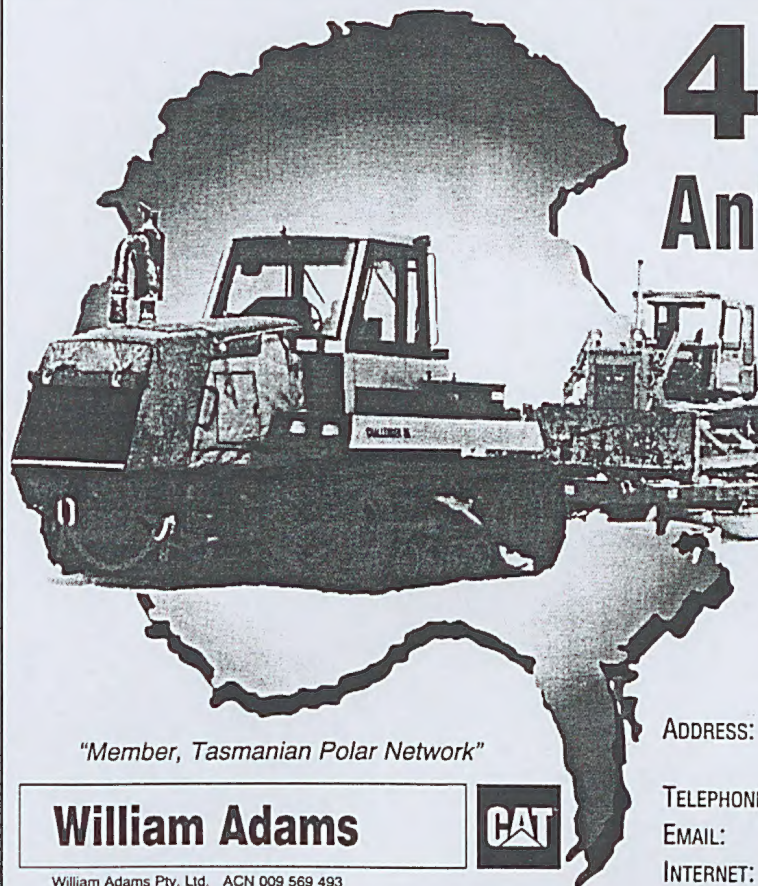
249 Sandy Bay Road, Hobart  
Tel: 6224 1572 Tel/Fax: 6224 2823  
EMAIL: [mnolan@mpx.com.au](mailto:mnolan@mpx.com.au)



# POLAR CALENDAR

3	March	1999	Visit to the AAD by Naoki Saito, First Secretary, Science, Technology & Environment, Embassy of Japan.
6	March	1999	TPN hosting SNOW DRAGON crew and scientists. For further details contact Office of Antarctic Affairs.
8	March	1999	Final date for submissions to Hobart International Airport's Master Plan.
12-15	March	1999	Workshop on the Evolutionary Biology of Antarctic Organisms, Curitiba, Brazil. E-mail: esfanta@bio.ufpr.br
16-19	March	1999	ICES/SCOR Joint Symposium on the Ecosystem Effects on Fishing, Montpellier, France. E-mail: hg@dfu.min.dk
19	March	1999	Visit to the AAD by Sumio Wakamatsu, Masaaki Tsujita, Dr Yasuhiko Naito and Toshikazu Ishii from the National Institute of Polar Research, Tokyo, Japan.
16	March	1999	TPN meeting. 11.00 am. Venue to be announced.
	April/May	1999	Proposed Polar Suppliers Expo at AAD. Details unavailable as yet.
1-10	May	1999	National Science Week. TPN included. For further details contact Office of Antarctic Affairs.
24	May	1999-	
4	June	1999	Antarctic Treaty Consultative Meeting. Lima, Peru.
30	May	1999-	ISOPE-99. The 9th International Offshore and Polar Engineering
4	June	1999	Conference and Exhibition, Brest, France.
28	June	1999-	IGARSS'99. International Geoscience and Remote Sensing
2	July	1999	Symposium. Hamburg, Germany. E-mail: tstein@phoenix.net
5-9	July	1999	SCAR VIII International Symposium on Antarctic Earth Sciences. E-mail: ISAES@gns.cri.nz
20-24	August	1999	Nordic Field Symposium: Limits and Changes in Permafrost and Periglacial Environments. Kevo Subarctic Research Station, Finland. E-mail: mattiseppala@helsinki.fi
20-24	September	1999	COMNAP meeting. Goa, India.
31	January	2000-	
6	February	2000	ISCORD 2000. INTERNATIONAL SYMPOSIUM ON COLD REGION DEVELOPMENT. HOBART. For further details contact Office of Antarctic Affairs.





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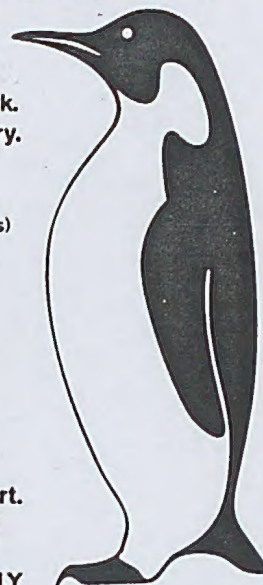


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## ANTARCTIC AND SOUTHERN OCEAN SHIPPING CALENDAR

2	March	1999	OCEANIC ODYSSEY	Arrives Hobart from NZ, departs for D'port.
3	March	1999	AURORA AUSTRALIS V6	Departs Fremantle for Mawson Base.
4-8	March	1999	SNOW DRAGON	Arrives Hobart from Antarctica.
5	March	1999	SKY PRINCESS	Arrives Hobart from Melb., departs for NZ.
8	March	1999	OCEANIC ODYSSEY	Arrives Hobart from D'port, departs for NSW.
8-9	March	1999	MARCO POLO	Arrives Hobart from NZ, departs for D'port.
9-11	March	1999	POLAR QUEEN V5	Arrives Casey Base from Mawson for AAD.
13	March	1999	L'ASTROLABE	Arrives Hobart from Antarctica.
13-15	March	1999	AURORA AUSTRALIS V6	Mawson Base.
16	March	1999	AURORA AUSTRALIS V6	Marine Science-sea ice buoys and krill collection.
18-19	March	1999	AURORA AUSTRALIS V6	Davis Base.
20	March	1999	POLAR QUEEN	Arrives Fremantle. Off-hire.
20	March	1999	AURORA AUSTRALIS V6	Marine Science.
25	March	1999	SKY PRINCESS	Arrives Hobart from NZ, departs for Melb.
25-27	March	1999	AURORA AUSTRALIS V6	Casey Base.
28	March	1999	AURORA AUSTRALIS V6	Marine Science.
3-4	April	1999	AURORA AUSTRALIS V6	Macquarie Island.
7	April	1999	AURORA AUSTRALIS V6	Arrives Hobart. Off-hire.

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